Title: **Evaluating Additional Conifer Seedlings Grown in a Gravel Bed for Fall Transplanting**

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CURRENT STATUS OF THE PROJECT

The experiment, using a gravel bed or field soil to grow conifer seedlings in before fall transplanting to the field, was started on May 29, 2002. A gravel bed, 10 ft. by 12 ft. by 1.25 ft., was constructed in 2001. A field bed 10 ft. by 12 ft. in size was also prepared at the same time. Three conifer species, Austrian pine (*Pinus nigra*), Serbian spruce (*Picea omorika*), and white fir (*Abies concolor*), were purchased and stored for two weeks before planting. Five plants of each species for the three transplant months (August, September, and October) were planted in four blocks. Therefore, a total of sixty plants were to be used from each type of planting bed (gravel vs. field soil) for each species. To minimize root damage when transplanting in the fall, guard rows of seedlings were planted between the rows of experimental plants.

Many of the seedlings died within a couple months after planting, most likely because they were held in cold storage too long before planting. White fir had to be dropped from the experiment since only two of 60 seedlings of this species planted in soil lived, and only seventeen planted in the gravel bed survived. By the middle of August, only about one-third of the Serbian spruce and Austrian pine seedlings were healthy enough to use in the transplanting experiment. Due to the large numbers of dead pine and spruce plants, seedlings were transplanted only in September and October. Even then, only 12 pine seedlings were transplanted for each treatment (gravel bed versus field soil) during each month. Although 12 Serbian spruce seedling grown in the gravel bed were transplanted each month, only six grown in the field were transplanted

Austrian pine and Serbian spruce seedlings were transplanted on September 13 and 17, respectively. In October, both species were transplanted on October 11. One September-transplanted Austrian pine seedling grown in the field and one September-transplanted seedling grown in the gravel bed died. One Serbian spruce seedling grown in the field also died after transplanting in October. Seedling survival will again be determined at the end of the study. Final shoot height will be determined at the end of July after the 2003-growth flush is completed. Shoot diameter and dry weight will also be determined at this time. Significant differences in shoot height, diameter, and dry weight will be determined by analysis of variance. A final report comparing growth of field-grown and gravel bed-grown will be completed by November 30, 2003.